

# Laparoscopic Gallbladder Surgery

Treating Gallbladder Problems



# A Common Problem

If you've had a painful attack of gallbladder symptoms, you're not alone. Gallbladder disease is a very common problem. Most often, the symptoms are caused by stones that form in the gallbladder. To treat the problem, you will likely need to have your gallbladder removed. This eliminates pain and prevents future attacks. Best of all, you'll be able to live a full, healthy life without your gallbladder.

## Symptoms of Gallbladder Problems

Gallbladder problems can cause painful attacks, often after a meal. Some people have only one attack. Others have many. Common symptoms of gallbladder attacks include:

- Severe pain or aching in the upper abdomen. The pain may come and go. Or, it can remain constant.
- A dull ache beneath the ribs or breastbone.
- Back pain, or pain in the right shoulder blade.
- Nausea, upset stomach, heartburn, or vomiting.



## How Gallbladder Problems Are Treated

The best way to remove stones and prevent new ones from forming is by removing the gallbladder. This is most often done using a type of surgery called **laparoscopy**. During the procedure, a thin device called a laparoscope lets your doctor see and operate inside the abdomen. Laparoscopy differs from traditional open surgery because only small incisions in the skin are needed.

This booklet is not intended as a substitute for professional medical care.

Only your doctor can diagnose and treat a medical problem.

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# Questions and Answers About Laparoscopy

It's normal to have some concerns about surgery. Below are answers to common questions:

- **Is laparoscopy the same as laser surgery?**

No. The laparoscope uses a small light and camera to provide images from inside the abdomen. No laser is used. Other instruments remove the gallbladder.

- **Why not just remove the gallstones?**

Unless the gallbladder is removed, more stones are likely to form. The gallbladder may also need to be removed for reasons other than gallstones.

- **When can I get back to work?**

You can often leave the hospital the same day as your surgery. You'll then need to rest for a time. Most people return to work within 5 to 10 days.

- **Will I need to eat a special diet after my gallbladder is removed?**

No. Once you've fully recovered from surgery, you can still eat all the things you like.

- **Will I have a big scar?**

No. Only small incisions are used during laparoscopy. This means less pain and a faster recovery.

- **Is the surgery always done laparoscopically?**

Not always. Laparoscopy has some advantages. But scarring from past surgeries or other factors may mean open surgery is safer for you.



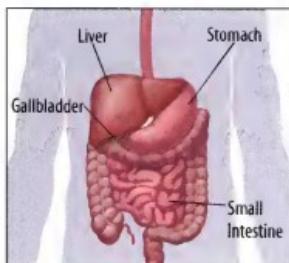
The laparoscope contains a small light and camera. It sends magnified images to a video monitor so your doctor can view the gallbladder during surgery.

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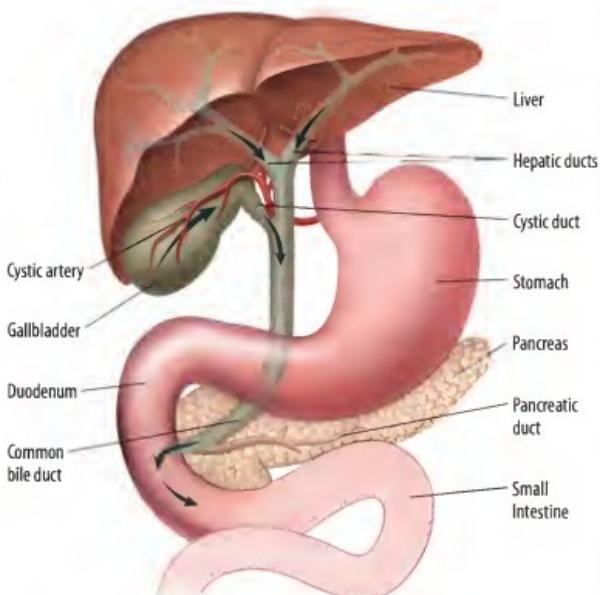
# Understanding the Gallbladder

The gallbladder is a small, pear-shaped organ in the abdomen. Its job is to store and release **bile**, a fluid made by the liver. Bile helps break down fats in the food you eat. Normally, bile moves smoothly through the digestive system. But if stones form in the gallbladder, they can block the release of bile. This can cause pain and lead to serious complications.



## When the Gallbladder Is Healthy

The gallbladder sits just beneath the liver in the upper right side of the abdomen. When the gallbladder is healthy, it stores and concentrates some of the bile made by the liver. After a meal, the gallbladder squeezes bile into **ducts** (small tubes). The bile then travels to the small intestine where it helps aid digestion.



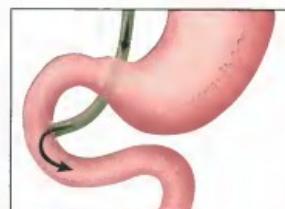
## How Bile Enters the Digestive System



**Your liver makes bile.** Most of the bile is sent through a network of ducts to the duodenum (first part of the small intestine). A small amount of bile is also sent to the gallbladder for storage.



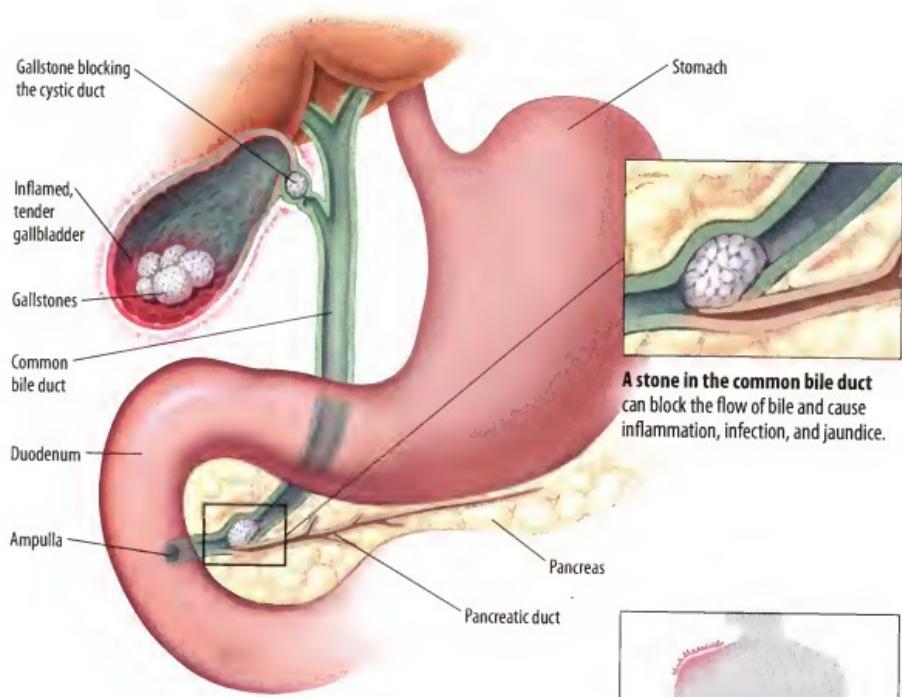
**The gallbladder stores some bile.** The gallbladder concentrates the bile by removing water. When bile is needed to digest fats, hormones (chemical messengers) signal the gallbladder to squeeze bile out through the cystic duct.



**Bile is sent to the duodenum.** The bile moves through the common bile duct to the duodenum. There, it mixes with food. The pancreas adds other digestive juices. Digestion continues in the small intestine.

## When Gallstones Form

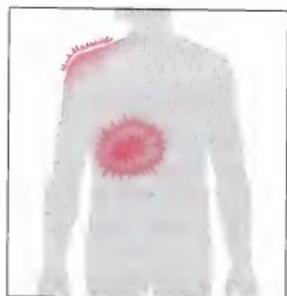
Most gallbladder problems are caused by gallstones. These form when substances in the bile crystallize and become solid. In some cases, the stones don't cause any symptoms. In others, they irritate the wall of the gallbladder. More serious problems occur if the stones move into nearby ducts and cause blockages. This stops the flow of bile and can lead to pain, nausea, and infection. **Jaundice** (a buildup of bile chemicals in the blood) can also occur. Symptoms include yellowing of the skin and eyes, dark urine, and itching.



**A stone in the common bile duct** can block the flow of bile and cause inflammation, infection, and jaundice.

## Problems in the Common Bile Duct

The common bile duct is formed by the junction of ducts leading from the liver and gallbladder. It's also a common place for problems to occur. This most often happens when a stone moves from the gallbladder and blocks a section of the duct. This can make bile back up into the liver, causing jaundice. If a gallstone blocks the junction with the pancreatic duct, it can inflame the pancreas and cause **pancreatitis**. This is a serious medical condition that requires immediate treatment.



**Pain caused by a blockage** is often felt in the upper right side of the abdomen. You can also have pain in the shoulder-blade, back, or beneath the breastbone.

# Your Evaluation

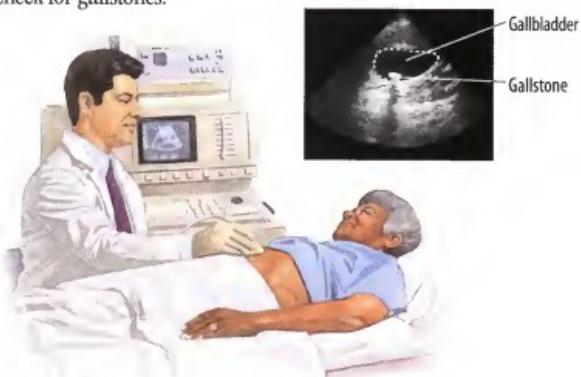
Before any treatment is done, you'll have a thorough medical evaluation. Your doctor will ask about your health and symptoms. You'll then have a physical exam. If needed, your doctor may also order other tests. Once the evaluation is complete, your doctor will talk with you about treatment options.

## Medical History and Physical Exam

Your doctor will ask questions about your symptoms. Be sure to mention the location and frequency of any pain. Also mention any other health problems you have. In addition, you may be asked about your diet and any medications you take. You'll then have a blood test and physical exam. During the exam, your doctor may press on your abdomen to check for pain.

## Ultrasound Scan

If your doctor suspects you have gallstones, you'll be scheduled for an ultrasound scan. This test uses painless sound waves to check for gallstones.



## Other Tests

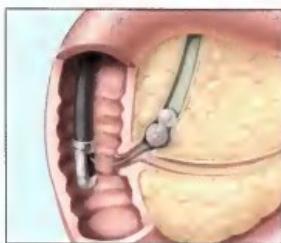
To learn more about your gallbladder problem, your doctor may order one or more of the tests below.

### CT scan ("CAT scan")

A CT scan uses a series of x-rays to produce detailed images of the body. These let your doctor view structures in the abdomen and can help rule out other causes of abdominal pain.

### HIDA (Hepatobiliary scan)

A HIDA scan uses a radioactive fluid (marker) to check gallbladder function. It can also show whether any bile ducts are blocked. After the test, the fluid safely passes from the body.



### ERCP (Endoscopic retrograde cholangiopancreatography)

This test uses a thin, flexible scope that is guided through the mouth and stomach to the bile duct. The scope helps find and remove stones from the duct. ERCP can also be performed during or after gallbladder surgery.

## Deciding on Treatment

After the evaluation, your doctor will talk with you about treatment options. If you've had one or more painful attacks, your doctor will likely advise removing your gallbladder. This prevents more gallstones from forming. It also helps prevent complications. And your liver will still make bile to aid digestion. If you have concerns, be sure to talk with your doctor. Together, you can decide on the treatment that's best for you.

## If You Wait to Have Surgery

Gallstones are not always an immediate risk to your health. So you may choose to delay having surgery. Be aware, though, that waiting to have surgery may lead to serious complications. These include:

- Continued pain and worsening of symptoms
- Gallstones moving to the common bile duct and causing infection or jaundice
- Gallstones obstructing the pancreatic duct and causing pancreatitis



## If You're Pregnant

Gallbladder problems may develop during pregnancy. This is because hormone changes can make bile more likely to form stones. If your gallbladder needs to be removed, your doctor will talk with you about the timing for surgery. In some cases, it can be delayed until after childbirth. But if your symptoms are severe, your doctor may advise having surgery during your pregnancy. This is done to protect you and your baby's health.

# Your Surgery

Your surgery will be done in a hospital or surgery center. Be sure to follow your doctor's advice on how to prepare for the procedure. During surgery, your doctor will use a laparoscope and other instruments to remove the gallbladder. Be aware, though, that there is a chance your doctor may need to switch to open surgery during the procedure.

## Getting Ready for Surgery

Your doctor will talk with you about preparing for surgery. Follow all the instructions you're given and be sure to:

- Tell your doctor about any medications, supplements, or herbs you take. This includes both prescription and over-the-counter items. You may need to stop taking them before surgery.
- Stop taking aspirin, ibuprofen, and naproxen as directed.
- Ask your doctor what to do if you take prescription blood thinners such as Coumadin (warfarin) and Plavix.
- Arrange for an adult family member or friend to give you a ride home after surgery.
- Don't eat or drink anything after midnight, the night before your surgery. This includes water and coffee.

## The Day of Surgery

Arrive at the hospital or surgery center on time. You'll be asked to change into a patient gown. You'll then be given an IV to provide fluids and medication. Shortly before surgery, an anesthesiologist will talk with you. He or she will explain the medications used to prevent pain during surgery. Laparoscopic gallbladder surgery is done using general anesthesia. This lets you sleep during the procedure.

### Risks and Complications of Surgery

Gallbladder surgery is safe. But it does have certain risks. These include:

- Bleeding
- Infection
- Injury to the common bile duct or nearby organs
- Blood clots in the legs
- Prolonged diarrhea
- Bile leaks



## During Surgery

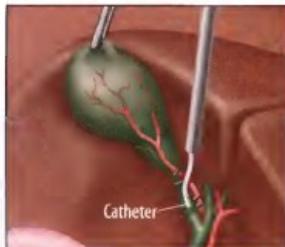
Your doctor will make a few small incisions (port sites) in your abdomen. The laparoscope is then inserted through one of the incisions. Using video images from the scope, other surgical instruments are carefully guided to the gallbladder. Once the gallbladder is removed, the incisions are closed with sutures or strips of surgical tape. In most cases, the entire procedure lasts less than 2 hours.

**A harmless gas inflates the abdomen.** The gas lifts the abdominal wall away from the internal organs. This lets your surgeon have a clear view of the gallbladder through the laparoscope.

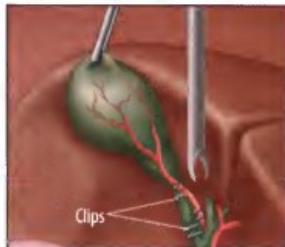


Small incisions in the abdomen allow your doctor to insert the laparoscope and other instruments.

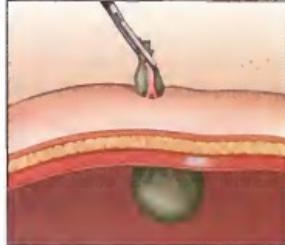
**A cholangiogram catheter may be inserted.** The catheter is a thin tube used to inject a special dye into the bile duct. Once the dye has been injected, an x-ray is taken of the duct. This helps show whether any stones have moved from the gallbladder into the duct.



**Small clips close off the bile duct and blood vessels.** The clips help prevent bleeding and bile leaks. Once the clips are in place, the gallbladder is detached from the liver. The clips are made of metal (titanium) or plastic that does not harm the body. They are left in place.



**The gallbladder is lifted for removal.** The neck of the gallbladder is raised through an incision. The contents of the gallbladder, including any stones, may be removed. The gallbladder is then carefully lifted out through the incision. Bile will now flow directly from the liver to the small intestine.



### If Open Surgery Is Needed

Your doctor may decide during surgery to switch from a laparoscopic to an open procedure. This does NOT mean something has gone wrong. Instead, it is done when your doctor feels it is safer to remove the gallbladder through a larger incision. If you have open surgery, the same methods are used to close off the ducts and blood vessels. The main difference is that you will have a larger incision in your abdomen. Having open surgery also means a longer hospital stay and recovery period after the operation.

# Your Recovery

You can often leave the hospital the same day as your surgery. At home, help make your surgery a success by taking an active role in your recovery. Start by caring for your incisions and managing pain. Then begin easing back into your routine. For best results, try to move around as much as you can. Follow your doctor's advice about what to eat. And be sure to see your doctor for follow-up care.

## When to Call Your Doctor

Call your doctor if you notice any of the following during your recovery.

- Fever over 101°F (38.3°C)
- Chills
- Sharp or increasing pain
- Increasing redness, bleeding, or drainage from an incision
- Vomiting or nausea that lasts more than 12 hours
- Shortness of breath
- Pain or swelling in your calf
- Symptoms of jaundice
- Prolonged diarrhea

## Right After Surgery

When the surgery is over you'll be taken to a recovery area to rest. You'll have surgical tape over your incisions. Special boots may be put on your legs or feet to prevent blood clots. You may also have some pain in your shoulder for a few hours. This is caused by the gas used during surgery. To help relieve discomfort, you may be given pain medications. You can go home once you're feeling better, often within a few hours.



You'll be asked to get up and move shortly after surgery. This helps prevent blood clots in your legs.

## Recovering at Home

You will likely feel tired. You may have some bruising around the incisions. You may also have some abdominal cramping after a few days. This is normal and should go away in time. To help speed recovery, follow your doctor's instructions. The tips below will help:

- Remove your dressing as advised by your doctor.
- Ask your doctor when it's okay to bathe again. This is often the next day after surgery.
- Walk and move around as much as you can.
- Talk with your doctor about what to eat. You may need to start with light meals.

## Managing Pain

It's normal to have some pain during recovery. To help you feel better, your doctor will prescribe pain medications to use at home. Don't wait for pain to get bad. Take your medications on time as directed. Because some pain medications can cause constipation, your doctor may also suggest a laxative or stool softener.

## Getting Back to Normal

You can start getting back to your normal routine as soon as you feel able. Just take it easy at first and follow all your doctor's advice. For best results:

- Ask your doctor about driving and going back to work. You can often return to your job within 5 to 10 days.
- Use pain relievers with acetaminophen to relieve occasional discomfort.
- You can begin having sex again when you feel ready.



## Eating Healthy Meals

Even though your gallbladder has been removed, you don't need to be on a special diet. It often takes a few weeks, though, for your digestion to fully adjust. You may have indigestion, loose stools, or diarrhea. This is normal and should go away in time. To aid digestion, eat a balanced diet that is high in fiber. And if diarrhea or other problems don't go away, be sure to tell your doctor.



## Keeping Active

To help speed recovery, be as active as you can. Regular exercise improves blood circulation. It's also good for your whole body. If you weren't active before surgery, ask your doctor about starting an exercise program. Even gentle exercise such as walking or bicycling can make a big difference in how you look and feel.

## Having Follow-up Care

Be sure to keep follow-up appointments during your recovery. These allow your doctor to check your progress and make sure you're healing well. During office visits, tell your doctor if you have any new or unusual symptoms. Your doctor can also help answer any questions or concerns you may have.

# Feeling Good Again

Don't let gallbladder problems put limits on your life. By having surgery to remove your gallbladder, you can prevent painful attacks. You can also avoid future problems. And you'll still be able to enjoy all your favorite foods and activities. So see your doctor for treatment. You *can* feel good again.

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